Space Weather Forecast

Issued on Monday, 30 May 2022 at 13:27 Local

This forecast provides a four day assessment of space weather events. The probabilities stated below are for reaching or exceeding the given levels. For more information about space weather impacts please see the Met Office Space Weather Scales https://www.metoffice.gov.uk/weather/learn-about/space-weather/uk-scales

Space Weather Forecast Headline: Slight chance of moderate-class flares.

Analysis of Space Weather Activity over past 24 hours
Solar Activity: Solar activity has been low, with one Common-class flare observed from a faded sunspot region. Two active regions in the northwest quadrant are developing, but with no significant flares. Two regions in the southeast are simple single polarity regions. No Earth directed CMEs (coronal mass ejections) have been observed in coronagraph imagery in the last 24 hours.

Solar Wind / Geomagnetic Activity: The solar wind has been elevated due to a solar fast wind. Both the total interplanetary magnetic field strength, and the important north-south component were weak throughout. Geomagnetic activity was mainly Quiet to Unsettled, with one Active interval.

Energetic Particles / Solar Radiation: No solar radiation storms were observed.

Four-Day Space Weather Forecast Summary
Solar Activity: Solar activity is expected to be mainly Low or Very Low, but with a slight chance of Moderate-class flares. This is initially due to an active region that recently crossed over the western limb, or new sunspot regions that are expected to rotate over the eastern limb in the coming days.

Solar Wind / Geomagnetic Activity: A CME which left the Sun on 28 May could glance the Earth on 01 June, but with low confidence and low probability. Earth is currently transitioning through a fast solar wind, with this expected to ease by day 3 (01 June). No further enhanced winds are then expected to connect with Earth. Geomagnetic activity is expected to be mainly Quiet with isolated Unsettled spells. There is a risk of Active or G1/Minor Storm intervals through days 1 and 2, with this risk continuing into day 3 (01 June) due to the very slight chance of a CME arrival.

Energetic Particles / Solar Radiation: Solar radiation storms are extremely unlikely.

Issued by Met Office Space Weather Advisor, Tel: +44 (0) 330 135 4254 Email: moswoc@metoffice.gov.uk

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Met Office

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Geomagnetic Storms:

Geo-Magnetic Storm Probability (Exceedance)	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Minor or Moderate	G1 to G2	No	5	1	5	1
Strong	G3	No	1	1	1	1
Severe	G4	No	1	1	1	1
Extreme	G5	No	1	1	1	1

Radio Blackouts - X Ray Flares:

X Ray Flares Probability	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	R1-R2 M Class	No	10	10	10	10
Very Active	R3 to R5 X	No	1	1	1	1

Solar Radiation Storms - (High Energy Protons):

Radiation Storms Probability (Exceedance)	Level (cm^{-2} sr^{-1} s^{-1})	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	≥ S1	No	1	1	1	1
Very Active	≥ S3 *	No	1	1	1	1

* S3 ≥ 10 MeV ≥ 1000 pfu and / or ≥ 50 MeV ≥ 10 pfu. (pfu = $cm^{-2}sr^{-1}s^{-1}$)

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